

REMARKS

Claims 1-34 are pending in this application. Claims 5, 11-13, 16, 17 and 19-31 are withdrawn from consideration. By this Amendment, claims 15-17 are amended to remove "means plus function" language. Claims 32-34 are added.

Applicant appreciates the courtesies extended to Applicant's representative during the July 1, 2004 personal interview. The following remarks constitute Applicant's record of the interview.

Applicant respectfully requests the Examiner to initial and return the Information Disclosure Statement filed May 24, 2004.

Claims 32-34 have been added. Claims 32-34 correspond to withdrawn claims 11 and 12. Should the withdrawn claims be rejoined and allowed in this application, Applicant requests that claims 32-34 also be allowed.

I. The Claims Define Patentable Subject Matter

The Office Action rejects claims 1-4, 6 and 14 under 35 U.S.C. §103(a) over Applicant's admitted prior art (AAPA) in view of JP 63-274929 to Matsushita et al. and claims 7-10, 15 and 18 under 35 U.S.C. §103(a) over AAPA and Matsushita and further in view of USP 6,521,913 to Murade. These rejections are respectfully traversed.

The Office Action recognizes that AAPA does not disclose a barrier layer made of a refractory metal. Applicant respectfully disagrees with the Office Action's assertion that Matsushita provides the deficiencies of Applicant's AAPA. Specifically, the Office Action asserts that it would have been obvious to use the two layer structure of the light shielding film, as claimed in independent claims 1 and 14, to achieve a high light shielding rate and to improve the performance of the light shielding. However, Matsushita does not disclose any motivation to achieve these objects. In fact, Matsushita discloses a colored resin film used as the light shielding film 4B to prevent reflection due to the metallic luster of a thin metal film

to create a nice looking liquid crystal display device. See e.g., Abstract. Thus, Matsushita teaches away from the invention, which uses a barrier layer formed of a refractory metal or a refractory metal compound containing no oxygen, to suppress oxidation of the metal layer of the light shielding film. See e.g., specification at [0017].

Furthermore, Matsushita does not recognize the problem addressed by the invention. Specifically, after forming the first light shielding film 11A, if heat treatment is performed at a temperature higher than 500°C to form an insulating film or for the purpose of annealing during the process of forming the switching elements, Ti of the first light shielding film 11A chemically reacts with an insulating film containing oxygen, such as SiO₂, in contact with Ti. As a result of the chemical reaction, an oxide film is formed. The formation of the oxide film results in degradation in the ability of Ti to block light.

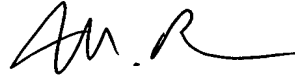
With respect to claims 15 and 18, as discussed above, Matsushita does not disclose forming a barrier layer by depositing a film of a refractory metal or a refractory metal compound containing no oxygen on the metal layer. Murade does not provide the deficiencies of Matsushita.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:MQB/ale

Attachment:
Amendment Transmittal

Date: July 7, 2004

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